CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 96-117

CITY AND COUNTY OF SAN FRANCISCO

REQUIRING THE CITY AND COUNTY OF SAN FRANCISCO TO CEASE AND DESIST DISCHARGING WASTE FROM ITS SOUTHEAST WATER POLLUTION CONTROL PLANT, BAYSIDE WET WEATHER FACILITIES AND WESTSIDE WET WEATHER CONTROL FACILITIES CONTRARY TO DISCHARGE PROHIBITIONS CONTAINED IN ORDER NOS. 94-149, 95-039, AND 87-120 (NPDES PERMITS)

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. The City and County of San Francisco (hereinafter called the City) owns and operates the Southeast Water Pollution Control Plant (SEP), Bayside Wet Weather Control Facilities and Oceanside Water Pollution Control Plant (OWPCP). During the wet weather, the City presently discharges domestic and industrial wastewater mixed with storm water runoff, all containing pollutants, into San Francisco Bay, through any of thirty-seven (37) wet weather control facilities. The City collects the wastewater in a combined sewer system. That is, the domestic sewage, industrial wastwater, and storm water runoff are all collected in the same pipes (combined sewer). The City is served almost 100% by combined sewers. Presently, these Combined Sewer Overflows (CSO) occur when rainfall intensity exceeds approximately 0.02 inches per hour.

2. The Bayside CSOs will be reduced substantially after 1997. Prior to the construction of the Bayside wet weather storage/transports systems the CSOs occurred 46 times per year. The wet weather storage/transport systems are designed so that on average these discharges will occur only 4 time per year in the North Point Sewerage Zone and 10 times per year in the Southeast Sewerage Zone and once per year for the area south of Islais Creek. The composition of these overflows can range from approximately 2 parts sanitary flow to one part runoff to greater than 50 parts runoff to one part sanitary flow and the duration of overflows can range from few minutes to a few days.

3. The SEP treats sewage from the eastern portion of the City, discharging it to San Francisco Bay via a deep water outfall at Pier 80 (Army street terminal). During wet weather periods, effluent flows greater than 100 mgd are discharged to Islais Creek via a near shore outfall at Quint Street. During an average rainfall year, such discharges occur 47 times for a total of 600 hours/year and 1,700 million gallons/year.

4. The OWPCP, a wastewater collection treatment and disposal system, serves the western (or oceanside) one-third of the City. At OWPCP, flows up to design capacity of 43 MGD receive secondary treatment via a pure oxygen activated sludge process. During wet weather, flows up to 65 MGD receive primary treatment using clarifiers. The combined sewage and storm water in excess of the OWPCP plant's capacity is collected in the Westside Storage/Transport system. The Westside system includes three large Storage/Transports: Westside Transport, Richmond Transport and the Lake Merced Transport. They are designed to hold combined sewage during wet weather for later treatment at the OWPCP. They also provide flow-through treatment. Flow-through treatment includes the removal of settleable solids and floatable pollutants. In the Westside Transport, storm flows that cannot be stored pass over a weir and under a baffle into a second box, called the decant structure. The decant then discharges into the Ocean Outfall or to the shoreline (through the wet weather discharge facilities); settleable solids and floatables remain in the first box, and are flushed to the treatment plant after the storm subsides. The Richmond and the Lake Merced Transports do not have decant structures, but do have baffles to retain floatable and settleable solids. The flows collected in the Richmond and Lake Merced Transport flow into the Westside Transport and then to the OWPCP. In an average year, decant from the Westside Transport is discharged to the ocean outfall 26 time per year. The combined capacity at the OWPCP and the three Transport/Storage facilities will reduce the average overflow frequency to a long term average of eight overflows a year from the eight existing wet weather discharge facilities. In the past, prior to the construction of the wet weather storage/transports systems these combined sewage overflow occurred 53 times per year (Oceanside average).

5. On June 20, 1984, the Board issued waste discharge requirements and NPDES permit for SEP in Order No. 84-027 and waste discharge requirements and NPDES permit for North Point and Southeast Sewerage Zones in Order No. 84-028. On the same date, the Board adopted Cease and Desist Order No. 84-029, requiring the City to cease and desist from discharging waste contrary to the requirements in Order No. 84-027, and Order No. 84-028. Subsequently, the Board reissued the Southeast WPCP permit twice on June 21, 1989 (Order No. 89-101) and on October 19, 1994 (Order No. 94-149). Specifically, the City's SEP was and still is violating Order No. 84-27 discharge prohibition against discharge of waste with less than 10:1 initial dilution.

6. The City was and still is also violating Order No. 84-28 discharge prohibition A.1 concerning the allowable overflow requirements. The Order No. 84-029 identified tasks and tentative schedules for the City to achieve a full compliance with Order Nos. 84-027 and 84-28. Because of the number of large scale projects and the intricate nature of the construction involved, Order No. 84-029 only identified tentative compliance schedules.

7. On June 15, 1988, the Board adopted Cease and Desist Order No. 88-105 to amend Order No. 84-029. Order No. 88-105 provided detailed schedules for the City to complete the Islais Creek Transport/Storage Facility, the Rankin Street Pump station and the SEP

Modification, and the separation of the wet-weather primary and secondary effluent discharges into Islais Creek. Furthermore, Order No. 88-105 allowed the City additional time to design and construct facilities to relocate the discharge from Baker Beach to the Mile Rock outfall. Mile Rock outfall discharges in the surf zone at the bottom of cliffs, well away from swimming beaches. Baker Beach outfall is located at a well-used public beach, and the CSO discharges at this location have direct public health impact. Subsequently, in October 1991, Order No. 88-105 was also amended by the Board with Order No. 91-153.

9. In 1988, the City identified three alternatives to address the permit violations from discharges receiving less than 10:1 initial dilution from the SEP. These three alternatives are: (1) a new Bay outfall with sufficient capacity to handle the overflows into Islais Creek during wet-weather; (2) a crosstown transport that would take the entire SEP effluent to the westside ocean outfall for discharge; (3) a request for a 10:1 initial dilution exception of the Basin Plan standards during wet-weather. In 1991, the City identified an additional alternative with a possible large scale regional water reclamation program. A large scale regional water reclamation program has the potential to benefit the entire San Francisco Bay by removing unnecessary discharges, developing a new water supply for agriculture and freeing-up potable water that may help the environment of the San Francisco/San Joaquin Delta and/or drought proof the urban Bay Area.

10. On February 1, 1996, the City submitted a written request for an exception to the Basin Plan. The exception request would apply to the existing seasonal and intermittent discharges to Islais Creek during wet weather of treated effluent from the SEP. The Regional Board will not allow exceptions to the Basin Plan Discharge Prohibition listed in Table 4-1 unless the exception meets certain criteria. An exception will be considered where:

> An inordinate burden would be placed on the discharger relative to beneficial uses protected, and an equivaluent level of environmental protection can be achieved by alternate means, such as an alternative discharge site, a higher level of treatment, and/or improved treatment reliability.

During wet weather, a blend of primary and secondary effluent is currently discharged from the SEP to Islais Creek. This discharge complies with the secondary treatment standards. The discharge occurs when the treatment plant effluent volume exceeds the capacity of the outfall pipe going into the bay. The discharge is intermittent during the wet weather season for approximately 600 total hours per year. This discharge will improve in April 1997 when the discharge will be limited to only secondary effluent. The construction for the "re-piping" project to meet this objective will cost an approximately $17 million. This wet weather discharge after improvement is expected to provide the "equivaluent level of environmental protection" required by the exception criteria. According to the City, by 1997, as a result of the reduction of CSOs into Islais Creek because of the higher

treatment capacity from 210 MGD to 250 MGD, and the re-piping project, the discharges will yield a 41% annual reduction in suspended solids discharged to Islais Creek.

11. Based on documents provided by the City's draft EIR (dated May 20, 1994), and the February 1, 1996 written exception request and staff review of the City's performance data from SEP, Board finds that the City's exception request meets the criteria set forth in the Basin Plan. The costs of other alternatives identified in Finding 9 are substantially higher, ranging from $72 to $225 millions and the alternatives will not produce measurable environmental benefits.

12. In the February 1, 1996 exception request, the City indicated that the Crosstown Tunnel (CT) has been a part of the City's Wastewater Master Plan since the 1970s. The City believes that the CT alternative still has validity and the City intends to retain the alternative as a long-range option.

13. On April 11, 1994, the Federal EPA adopted the Combined Sewer Overflow (CSO) Control Policy (50FR 18688). This Policy establishes a consistent national approach from controlling discharges from CSOs to the Nation's water through the NPDES permit program. The City is served almost 100% by combined sewers. One of many requirements set forth by the Policy calls for the maximize flow to POTW treatment plant. The City has prepared a facilities wet weather operation plan. This operation plan was developed to achieve the following objectives.

    a. Maximize the volume of wastewater treated at either the SEP or North Point Treatment Plant and discharged via deep water outfalls, consistent with the hydraulic and treatment capacities of the City 's storage, transport and treatment facilities, and

    b. Assure that all discharges from the control facilities are first baffled to reduce floatable volume.

    The Islais Creek wet weather discharge is part of the operation plan. Presently, the peak wet-weather flow (PWWF) capacity of the Southeast Plant is 210 MGD. Upon completion of the $17 million "re-piping" improvement the plant PWWF capacity will increase to 250 MGD.

14. The City has made good progress in completing the necessary wastewater projects identified in the Board's 1984 Cease and Desist Order (CDO). In response to objectives set forth by the City's 1974 Master Plan Environmental Impact Statement and Report, as of March 1995, the City has spent over $1.3 billion dollars City-wide on construction projects to reduce the water quality impact of the combined sewer system. The majority of these expenditures have been directed toward controlling the CSOs. The following table summarizes the status of Master Plan projects.

Master Plan Projects
Cost($000's) Estimates and Expenditures

Current Projects	Estimated Costs	Expended By March 1995
Bayside Core (completed)	$ 409,119	$ 409,119
Westside Core (completed)	$ 345,114	$ 344,832
OWPCP	$ 256,567	$ 249,499
Southeast Facilities	$ 379,135	$ 250,961
Richmond & Lake Merced Transport	$ 81,586	$ 61,842
TOTAL MASTER PLAN PROJECTS	$1,483,521	$1,316,253

Source: City and County of San Francisco Department of Public Works.

Approximately 88% of the total costs have been expended as of the end of March 1995. Total program cost to provide both dry weather and wet weather controls are expected to exceed 1.45 billion dollars.

15. In the City's February 1, 1996 exception request, the City indicates that they will continue to strongly support a feasibility study on the Central California Regional Water Recycling Project. The study examines the feasibility of collecting excess reclaimed water and exporting the reclaimed water to the San Joaquin Valley for agricultural irrigation. In 1991, the City began discussing this project concept with the Bay Area wastewater and water agencies, the US Bureau of Reclamation, Valley agricultural interests and federal and state resource agencies. By 1993 there were many local agencies which had shown considerable interest in the project concept. Agencies currently participating in the ongoing study are listed as follow:

Wastewater Agencies:

San Francisco Department of Public Works
City of San Jose
East Bay Dischargers Authority
East Bay Municipality Utility District
Central Contra Costa Sanitation District
South Bay System Authority
City of Palo Alto

City of Millbrae
Dublin/San Ramon Sanitation District
Delta Diablo Sanitation District
San Francisco International Airport

Water Agencies

San Francisco Water Department
Alameda County Water District
Zone 7 - Alameda County
Santa Clara Valley Water District

Federal Government

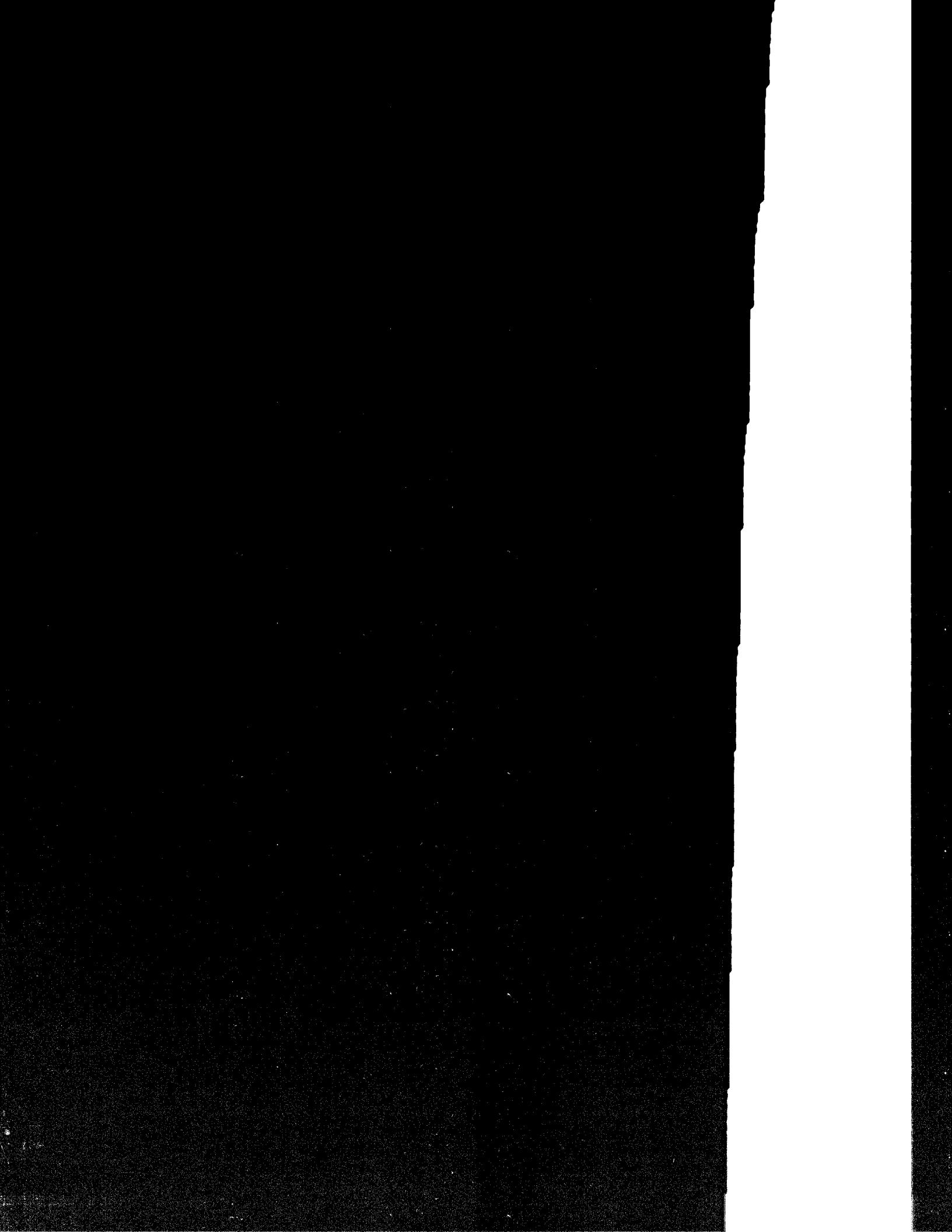
U.S. Bureau of Reclamation

Agriculture Interests

San Luis Delta Mendota Authority
Exchange Contractors

16. The City has made good progress in completing wastewater projects necessary to comply with Order No. 88-105. As of September 1995, the status of the required construction projects is as follow (these projects are necessary to assist the City to achieve compliance with the discharge prohibitions of Order 84-28 for Southeast, Richmond Transport and North Point Wet Weather Control Facilities):

	Construction Project	Status
1.	Griffith pump stations and force main	Completed
2.	Yosemite and Fitch outfall consolidation	Completed
3.	Sunnydale outfall consolidation	Completed
4.	Mariposa transport	Completed
5.	Lake Merced Transport	Completed
6.	Islais Creek Transport/Storage Facility	Not Yet Complete[1]
7.	Rankin Street Pump Station	Not Yet Complete[2]
8.	Southeast Treatment Plant Modifications	Not Yet Complete[1]
9.	Richmond Transport	Not Yet Complete [3]



[1] CDO No. 88-105 required that the Islais Creek transport facility be completed and put into operation by January 1996. The City experienced some problems with environmental review, permitting, financing and other contractual issues. The City expects to complete the entire project by April 1997.

[2] CDO No. 88-105 required that the Rankin Street Pump Station be completed and operating by October 1, 1996. The City experienced delays on the project due to bid protests by contractors. The City expects to complete the entire project by April 1997. According to the City, by the Fall of 1996, the City will partially activate the transport/storage system to provide approximately 23 million gallons of storage for the combined sewage (when the project is completed it will provide 32.5 million gallons of storage). This will result in the Selby, Marin, South 3rd Street and Evans Avenue point overflowing from 20-25 times in the wet season between October 1996 and April 1997, depending on the rainfall. This is a significant reduction from the current average of 46 overflows per year the City now experiences.

[3] CDO No. 88-105 required the City to reduce overflows from 56 times to 8 times per year on an average basis from the four existing overflow locations by September 1994. However, in 1991 the City and Golden Gate National Recreation Area (GGNRA) proposed to relocate the Baker Beach discharge to the Mile Rock location. The proposed relocation would provide long-term benefits to public health and water quality, beyond those realized by reducing overflow frequency to eight times per year. Baker Beach is a well-used public beach, and CSO discharges here have direct public health impacts. The runoff from CSO is often used by children for wading, since it is shallow, still, and warmer than ocean water. By contrast, the Mile Rock outfall is located in an inaccessible point at the foot of cliffs, well away from swimming beaches. Because of the revision of the outfall location, the Richmond Transport combined sewer overflow facilities will not be completed until January 31, 1997.

17. This action is an order to enforce waste discharge requirements previously adopted by the Board. This action is therefore categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15121 of the Resources Agency CEQA Guidelines.

18. The City and interested persons have been notified of the Board's intent to revise Cease and Desist Order Nos. 88-105 and 91-153 and have been provided an opportunity to submit written comments and appear at the public meeting. At a public meeting, the Board heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDER THAT:

A. The City and County of San Francisco shall cease and desist from discharging waste or threatening to discharge waste contrary to the Order Nos. 94-149, 95-039, and 87-120 cited in Finding 5 above in accordance with the time schedules contained in this Order.

B. The City shall achieve compliance with Order No. 94-149 with respect to the Effluent Limitations 1.3 according to the following time schedule:

	Task	Completion Date
1.	Modify the SEP and related facilities to assure that only secondary effluent can discharge to Islais Creek during wet weather periods.	April 20, 1997

C. The City shall achieve compliance with the discharge prohibitions of Order 95-039 (Bayside Wet Weather Control Facilities) with respect to overflow criteria (A.1) according to the following time schedule:

Islais Creek Transport

	Task	Completion Date
1.	Complete Construction of Pumping Facilities for Transport Dewatering	April 1, 1997
2.	Achieve Full Compliance with Overflow Requirements for Control facilities	April 1, 1997

D. The City shall achieve compliance with the discharge prohibitions of Order 87-120 (Richmond-Sunset Wet Weather Control facilities) with respect to overflow criteria (A.2) according to the following time schedule:

Richmond Transport (RT)

	Task	Completion Date
1.	Complete Construction of RT	January 31, 1997
2.	Achieve Full Compliance with overflow requirements for control facilities 1-8	January 31, 1997

E. The City shall submit a regular status report to the Board. The report will be due on the 15th day of each month. The report should describe progress toward compliance with schedules in this order. If non-compliance or threatened non-compliance is being reported, the City should provide reasons for non-compliance and an estimated compliance date. Every third report (January 15, April 15, July 15, and October 15) should include a comparison of estimated and scheduled completion dates for each date in this Order.

F. Order Nos. 84-27, 84-28, 88-105, 89-101, 91-153 and Order No. 92-156 are hereby rescinded.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on August 21, 1996.

Loretta K. Barsamian

Loretta K. Barsamian
Executive Officer